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Fig. 2

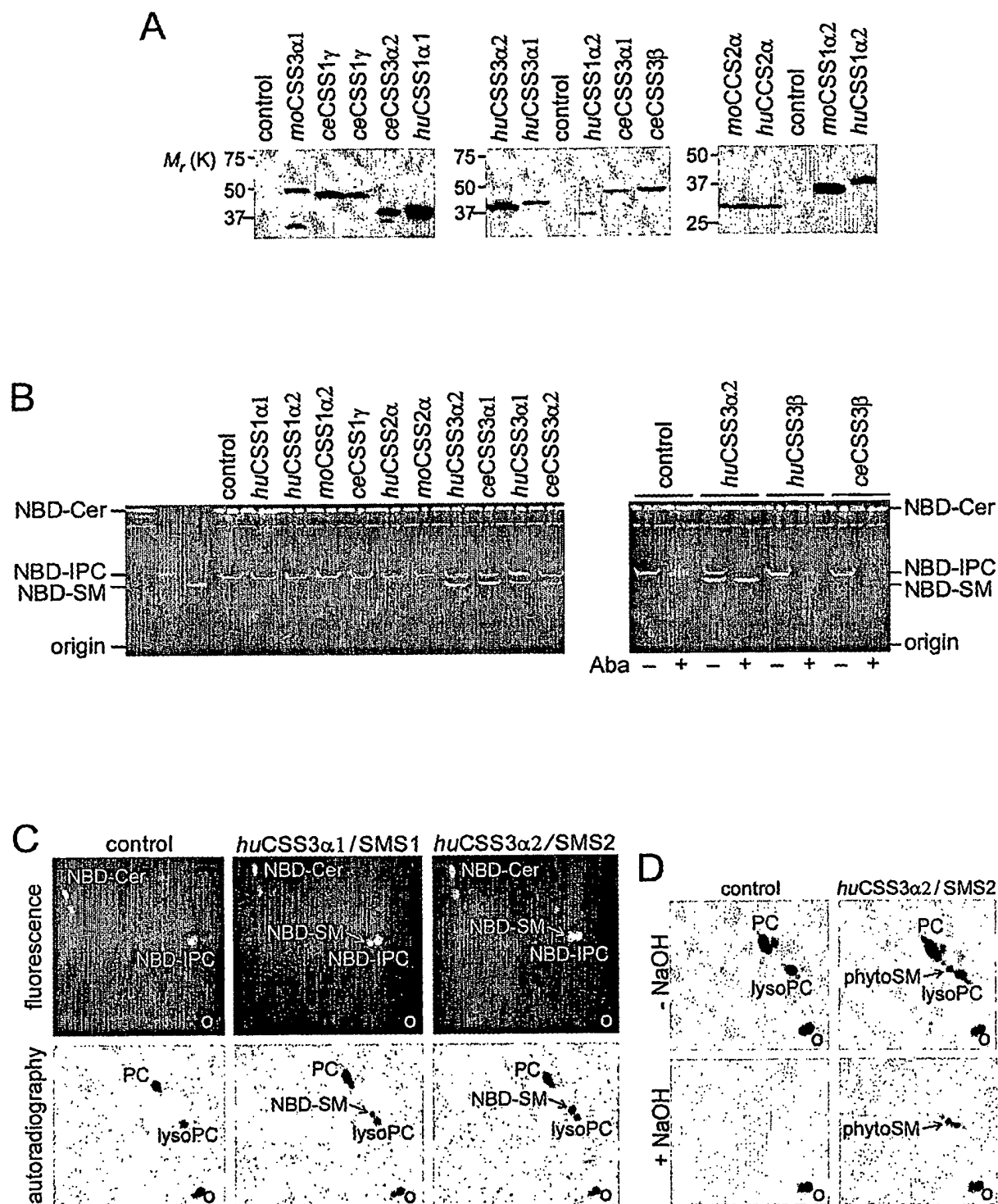


Fig. 3

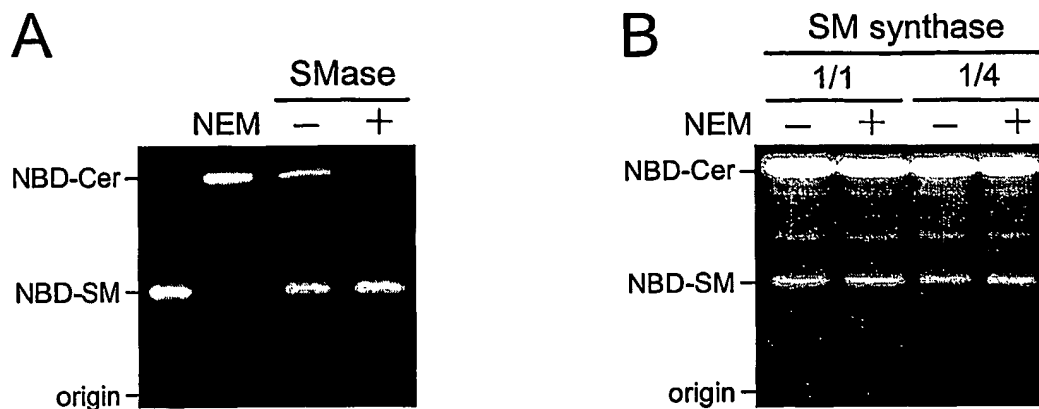
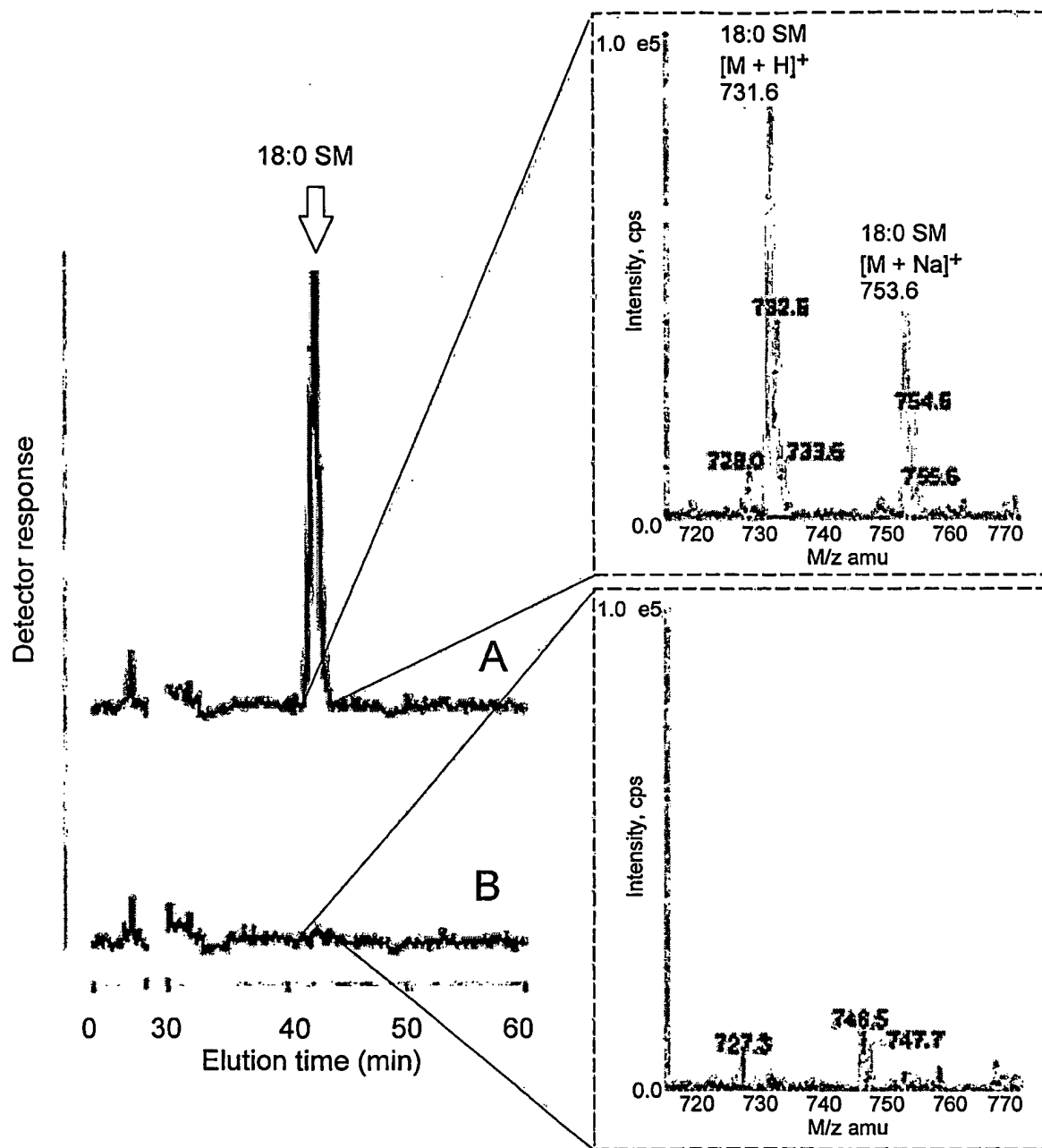
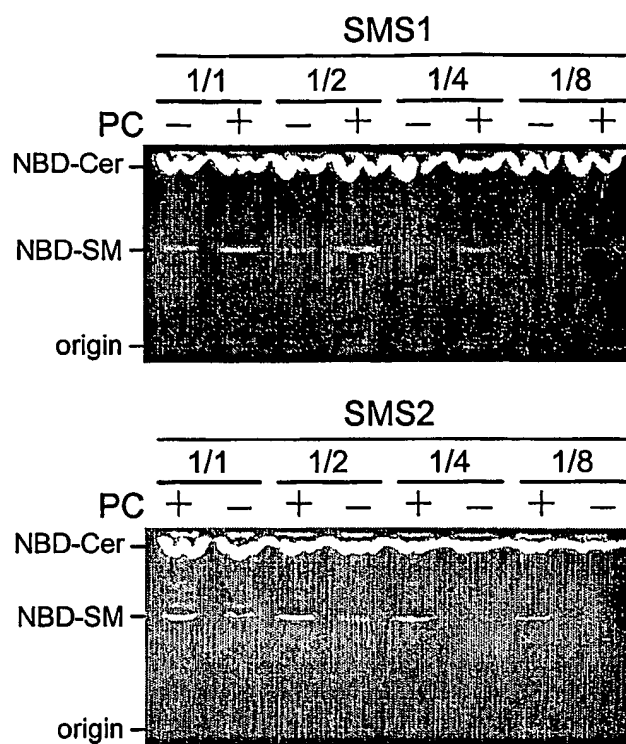


Fig. 4



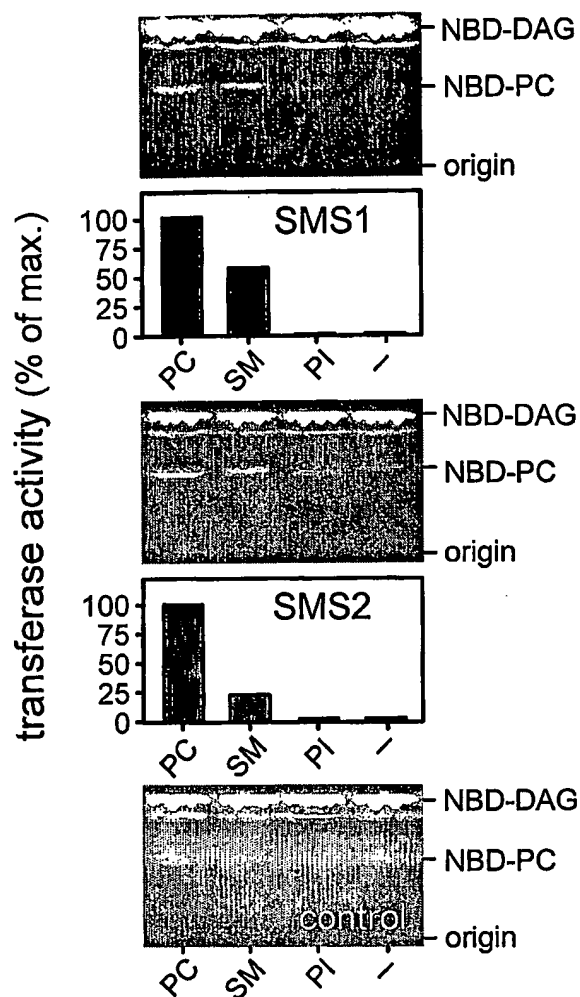
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Fig. 5



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Fig. 7



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Fig. 8

A

Hs SMS1 1 MKEVIVYWSPKKVDWLEENAMPEYCEPLE--HFTGQDLINLTQEDFKKPPLCRVSSDNG
Hs SMS2
Hs SMSr 1 MAGPNQLCLRRWTTKHVAVWLKDEGF FEYVDILCNKHRLDGITLLTLETDLRSPPLEIKVLGD I

Hs SMS1 58 QRL LDM IET LKMEH--LEAH--KNGHANGHLN--IGVDIPTPDGSFSIKIKPNG-MPNGYRK-
Hs SMS2 1 MDI IETAKLEEH--LENQ--PSDPTNTYARPAEPVEEENKNGNGKPKSLSSG-LRKGTKKY
Hs SMSr 66 KRLMLSVRKLQKIHIDVLEEMGYNSQSPMGSMTPFISALQSTDWLCNGEISHDCDGPITDLNSDQ

TM1 -D1-

Hs SMS1 114 -EMIKIPPELERSQYPMEWGKTFLAFLYALSCFVLTTVMISVVHERVPPKEVQPPLPDTFFDHF
Hs SMS2 58 PDYIGIAMPTESRNKFPLEWWKTGIAFIYAVFNVLVTTVMITVVHERVPPKEVQPPLPDKFFDYI
Hs SMSr 131 YQYMNKGKNKHSVRLDP-EYWKTI LSCGYVFI VFGFTSFIMVIVHERVPPDMQTYPPLPDI FLDSV

TM2 D2-TM3

Hs SMS1 178 NRVQWAFSICEINGMILVGLWLTQWLLKYKSIHSRRFCIVGTLYLYRCITMYVTTLRPVGMHF
Hs SMS2 122 DRVKWAFSVSEINGMILVGLWLTQWLLKYKSIHSRRFCIVGTLYLYRCITMYVTTLRPVGMHF
Hs SMSr 196 PRTPWAFAMTEVCGMILCYIWLVLVLLHKHRSILLRRLCSLMGTVELLRCTMFVTSLSVPGQHL

D3 TM4

Hs SMS1 243 NCSPKLFGDWEAQLRRIMKLIAGGGLSITGSHNMCDDYLYSGHTVMTLTLYLFIKEYSPRRLWWY
Hs SMS2 187 QCAPKLNQDSQAKVQRILRLISGGGLSITGSHNMCDDYLYSGHTVMTLTLYLFIKEYSPRHFWWY
Hs SMSr 260 QGTGKIYGSVWEKLHRAFAIWSGFGMTLTGVH-TCGDYMFSGHTVMTLNLFFVTEYTPRSWNFL

TM5 D4-TM6

Hs SMS1 309 HWICWLLSVVGIFCILLAHDHYTVDVVAYYITTRLFWWYHTMANQQVLKEASQMNLLARVWWYR
Hs SMS2 252 HLICWLLSAAGIICILVAHEHYTDVIAVYITTRLFWWYHSMANEKLNKVVSSQTNFLSRAWWFP
Hs SMSr 324 HTLSWVLNLFGLIFFILAAEHYSTDVFIAVYITTRLFLYHTLANTR----AYQQSRRARIW-FP

Hs SMS1 373 PFQYFEKNVQGIVPRSYHWPFPWP-VVHLSRQVKYSRLVNDT
Hs SMS2 317 IFYFFEKNVQGSIPCCESWPLSWPPGCFKSSCKKYSRYQKIGEDNEKST
Hs SMSr 384 MRSFEENVNGTVRNEYCWPFESKRAIKRLIG

B

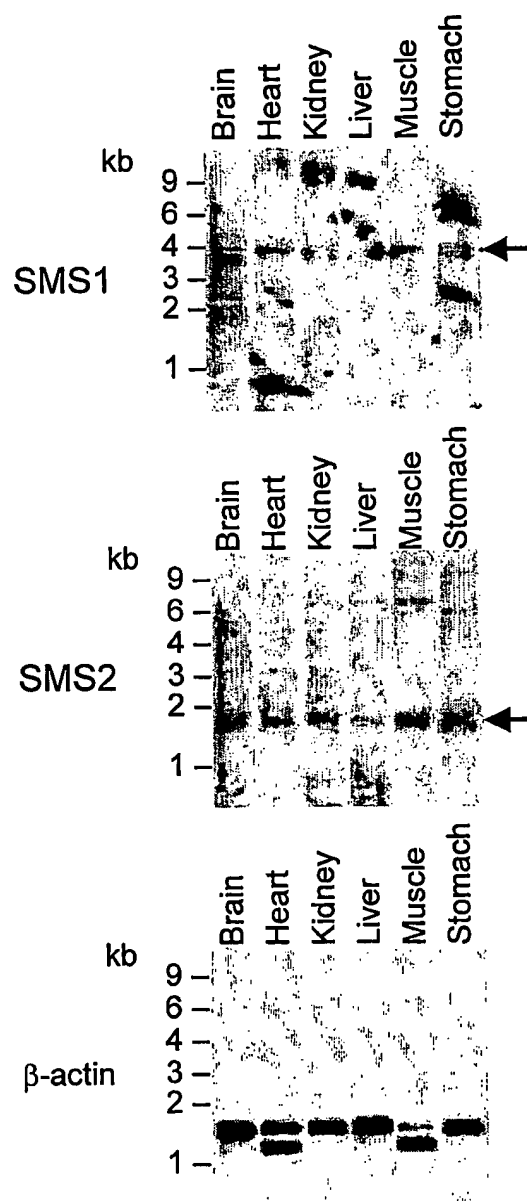
-D1- D2 D3 D4

Hs SMS1 168 PLPD 213 RRFECIVGTLYLYRCITMYVT 277 CGDYLYSGHT 328 HYTVDVVVAYYITTRLFWWYH
Hs SMS2 112 PLPD 157 RRFECIVGTLYLYRCITMYVT 221 CGDLYSGHT 272 HYTDVIAVYITTRLFWWYH
Ce SMS1 175 PLPD 220 RRLCFIGSILYGMRCITMYVT 288 CGDYLYSGHT 339 HYTDVILSYFACTRVFWAYH
Ce SMS2 88 PLPD 133 RRTFLLGAIMYGLRAVILGVT 202 CGDLMFSGHT 253 HYTMQVLIAYWLTSHVFWSYH
Ce SMS3 65 PLPD 110 KRNVFCAGTLYAMRSVTLAAT 175 CGDLYSGHT 226 HYTDVIAVYWLSNMVFRMYH
Pf SMS1 161 PLKD 211 IRIILLISFIYCIIRSEFIYVT 266 CTDLVLSGHT 315 HYTVDLVLMGVVFGGSVFLFYH
Pf SMS2 112 PLSD 161 CRFLYIVGSFYIIRGLIYVT 216 CADLIVSGHT 265 HYISDVLGLIFGVFMFSFYH
Hs SMSr 185 PLPD 230 RRLCSLMGTVELLRCTMFEVT 293 CGDYMFSGHT 344 HYISDVLGLIYITTRLFLYYH
Dm SMSr 232 PLPD 277 RREFALAGTVLLRCVTMLIT 350 CGDYMFSGHT 401 HYISDVLGLIYITSRFLYYH
Ce SMSr 214 PLPD 259 RRMFSLLGTVLLRCFTMLIT 322 CGDYMFSGHT 373 HYISDVLGLIYISSRMFLYYH
Ce SMSdr 111 PLPD 183 RRVFFCLAMAYSFRALCYTIF 247 CGDLYSGHT 298 HYMDIVLGLYTVSTRIFMEYH

consensus PLPD RRxxx b x n x b φ x x R x x b x b T CGD x b x SGHT HYT b D V x b n φ x x n n x b F x x YH

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Fig. 10



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Fig. 11

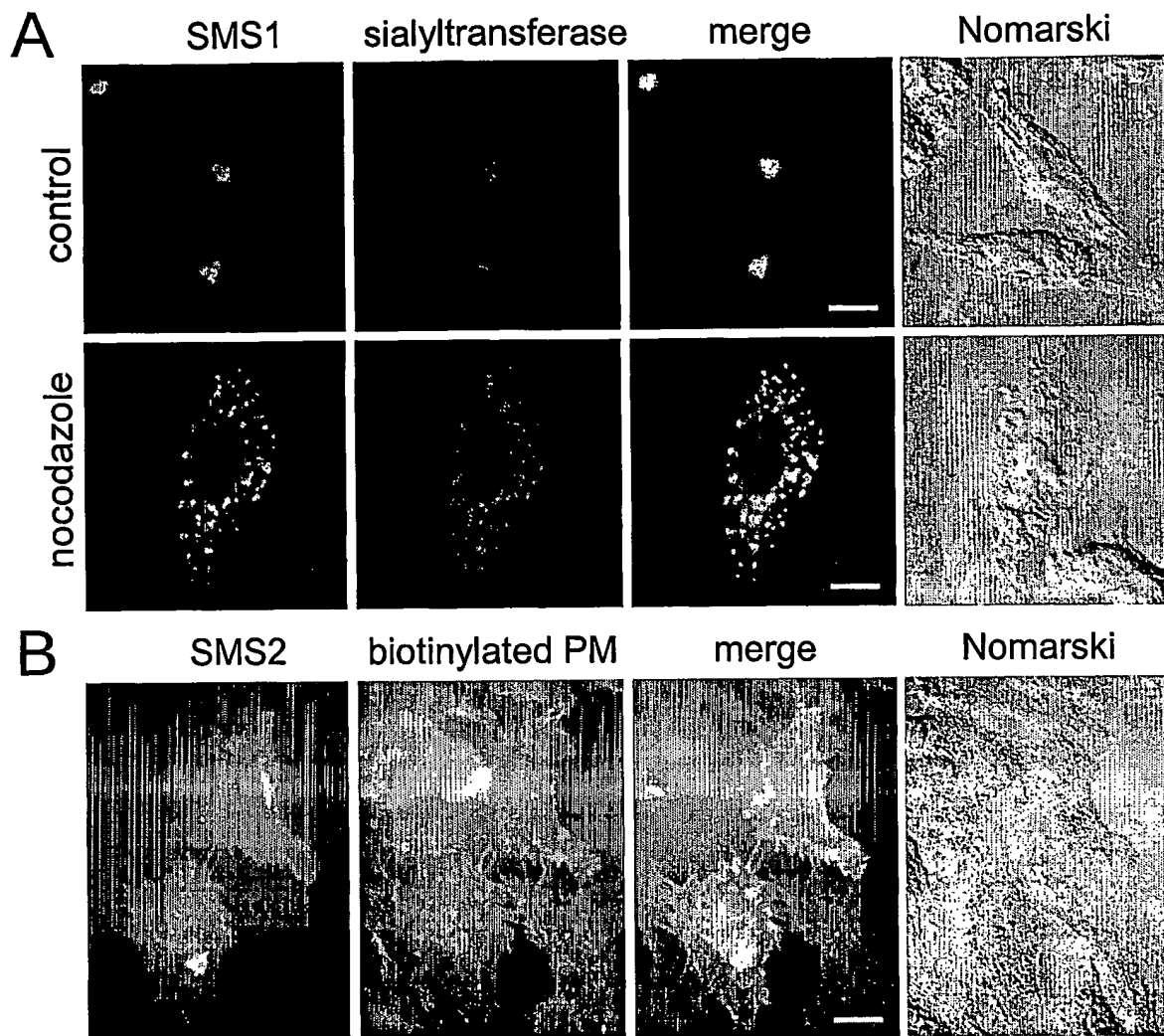
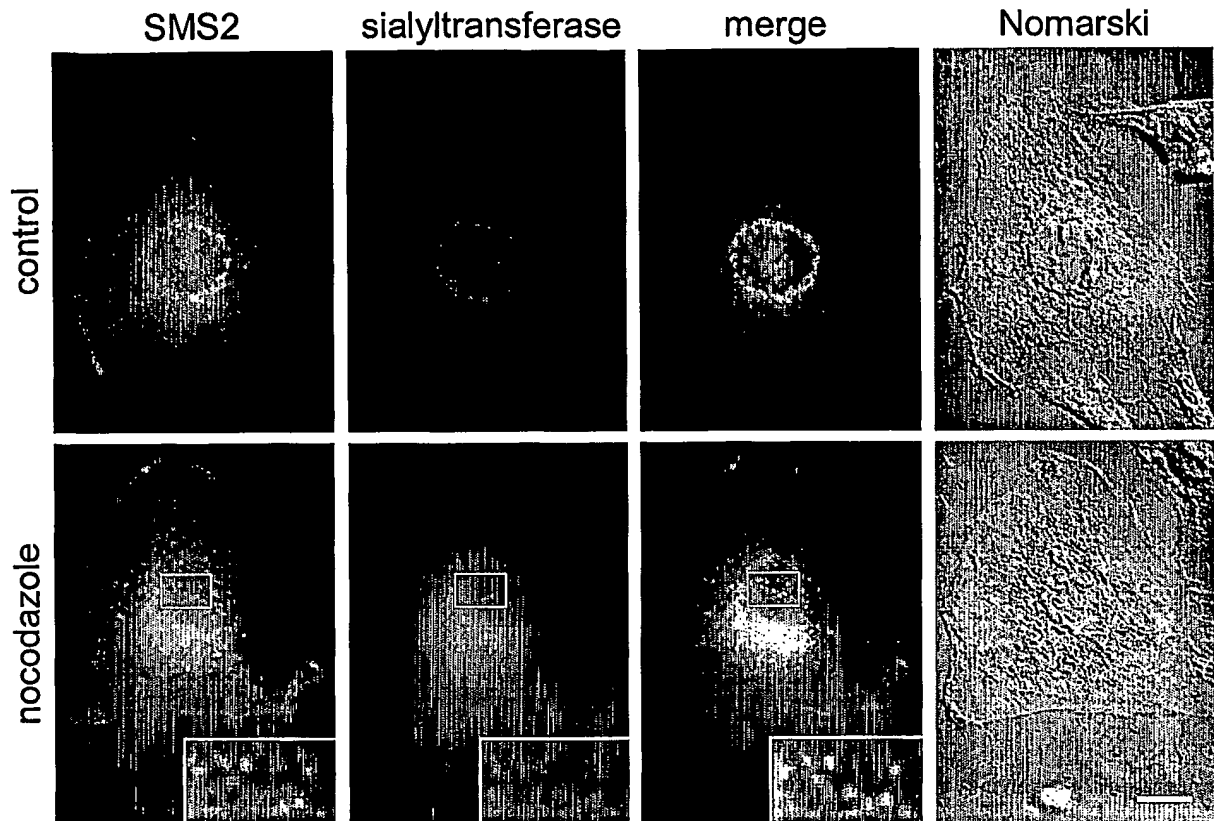


Fig. 12



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Fig. 13

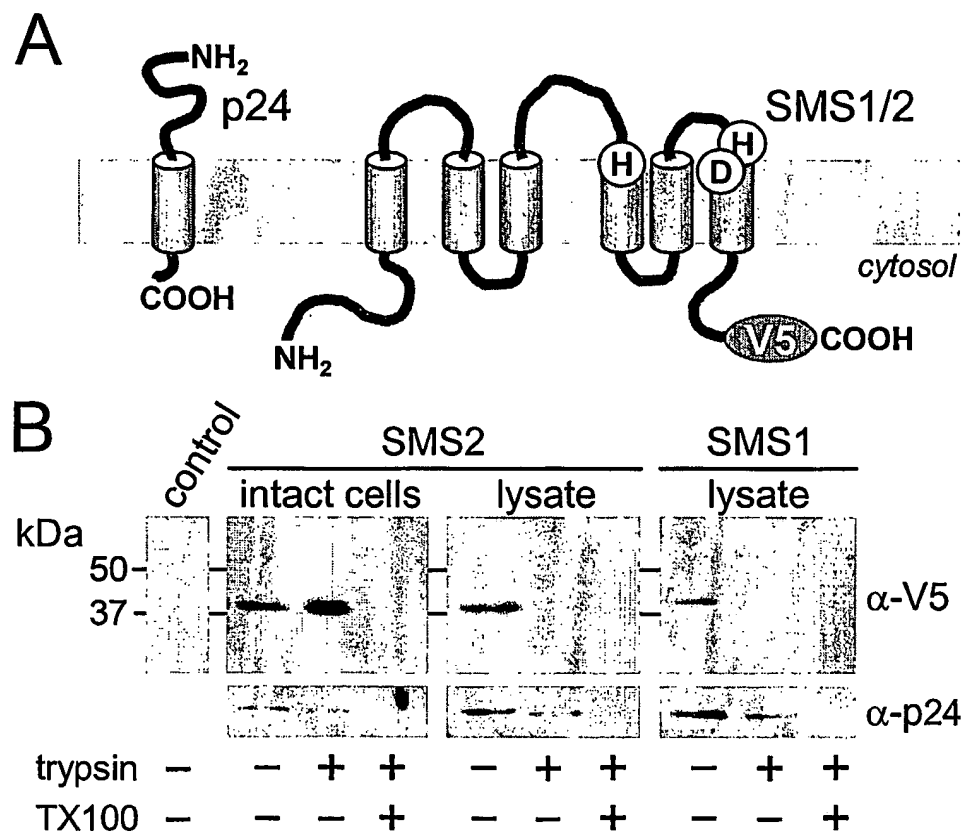


Fig. 14

